

US Patent 5,611,049, Claim 1:

1. In a network of digital computers that includes a first plurality of Network Distributed Cache (“NDC”) sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

(a) the NDC receiving the request to access data in the stored dataset;

(b) the NDC checking the NDC buffer at this NDC site to determine if a projected image of data requested from the stored dataset is already present there;

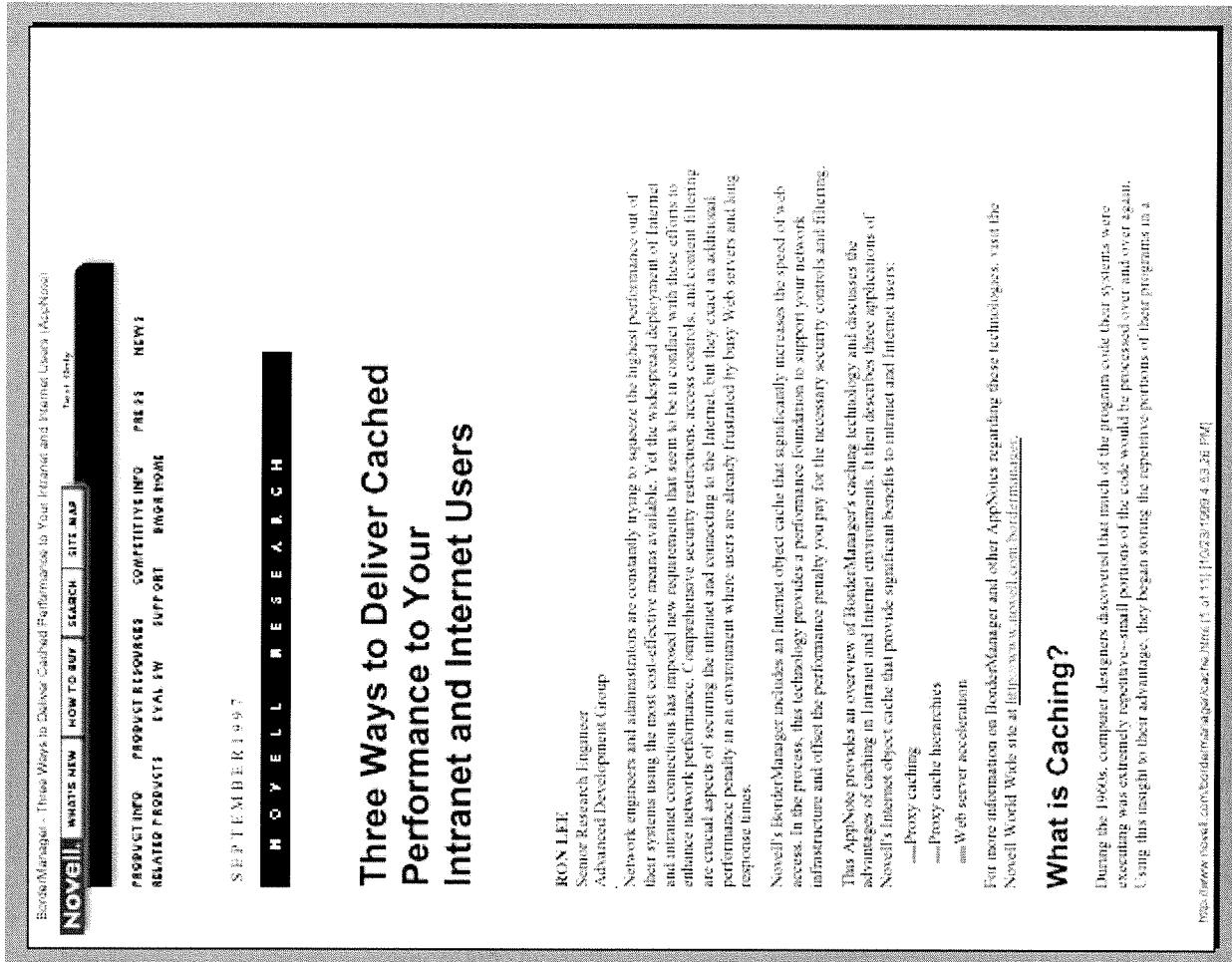
(c) if the NDC buffer of this NDC site does not contain a projected image of all data requested from the stored dataset, and if the NDC site receiving the request is not the NDC server terminator site for the stored dataset, the NDC of this NDC site transmitting a request for data from this NDC site downstream to another NDC site closer to the NDC server terminator site for the stored dataset than the present NDC site.

(d) if the NDC buffer of this NDC site does not contain a projected image of all data requested from the stored dataset, and if the NDC site receiving the request is the NDC server terminator site for the stored dataset, the NDC of the NDC server terminator site accessing the stored dataset to project an image of the requested data into the NDC buffer of the NDC server terminator site.

(e) repeating the steps (a) through (d) until the NDC buffer of the downstream NDC site receiving the request contains a projected image of all requested data.

- (f) each successive NDC site, having obtained a projected image of all the requested data, returning the requested data upstream to the NDC site from which the NDC site received the request until the requested data arrives at the NDC client terminator site, each NDC site that returns data upstream to the requesting NDC site retaining a copy of the returned data that the returning NDC site may subsequently transmit to an NDC site other than the NDC site to which the returning NDC site first returned the data, whereby images of the stored dataset may be projected concurrently from a single NDC site into the second plurality of NDC client terminator sites; and

(g) the NDC client terminator site, upon receiving the requested data, returning the requested data to the client site that requested access to the stored dataset



NCT010657

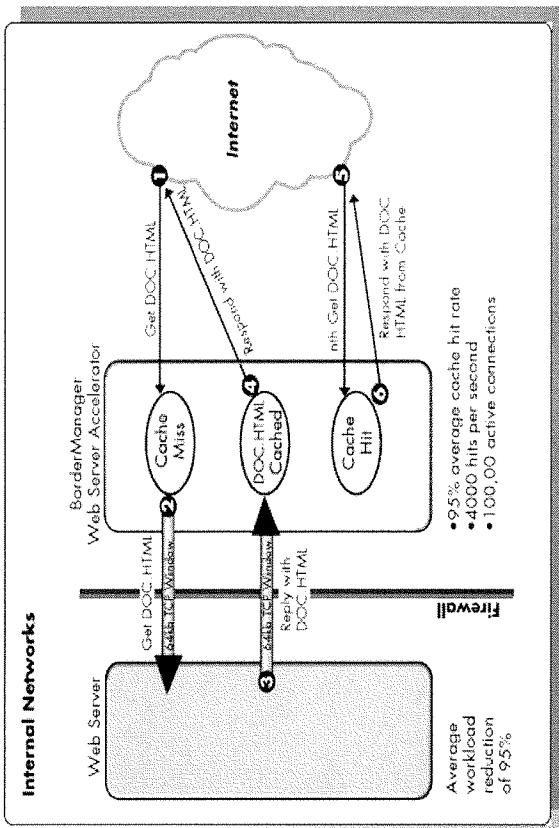


Figure 8

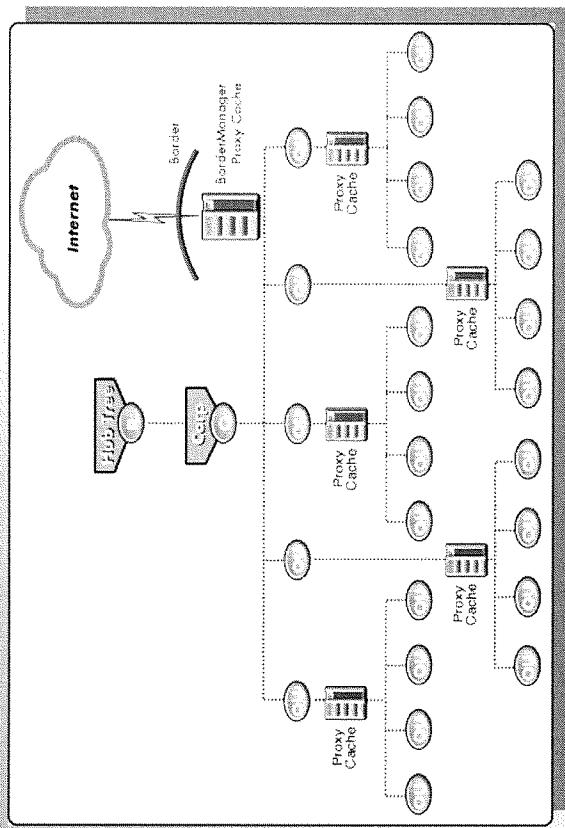


Figure 6

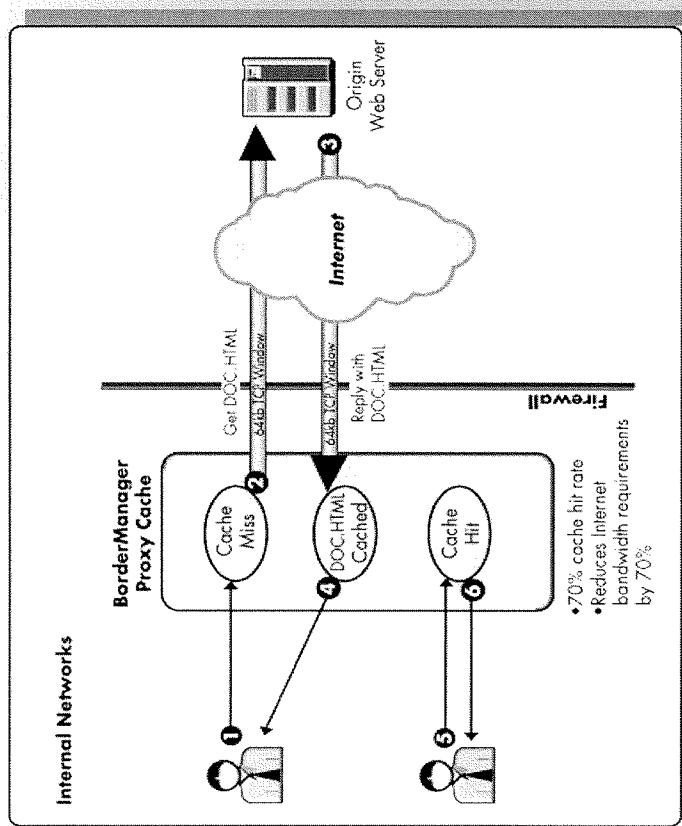
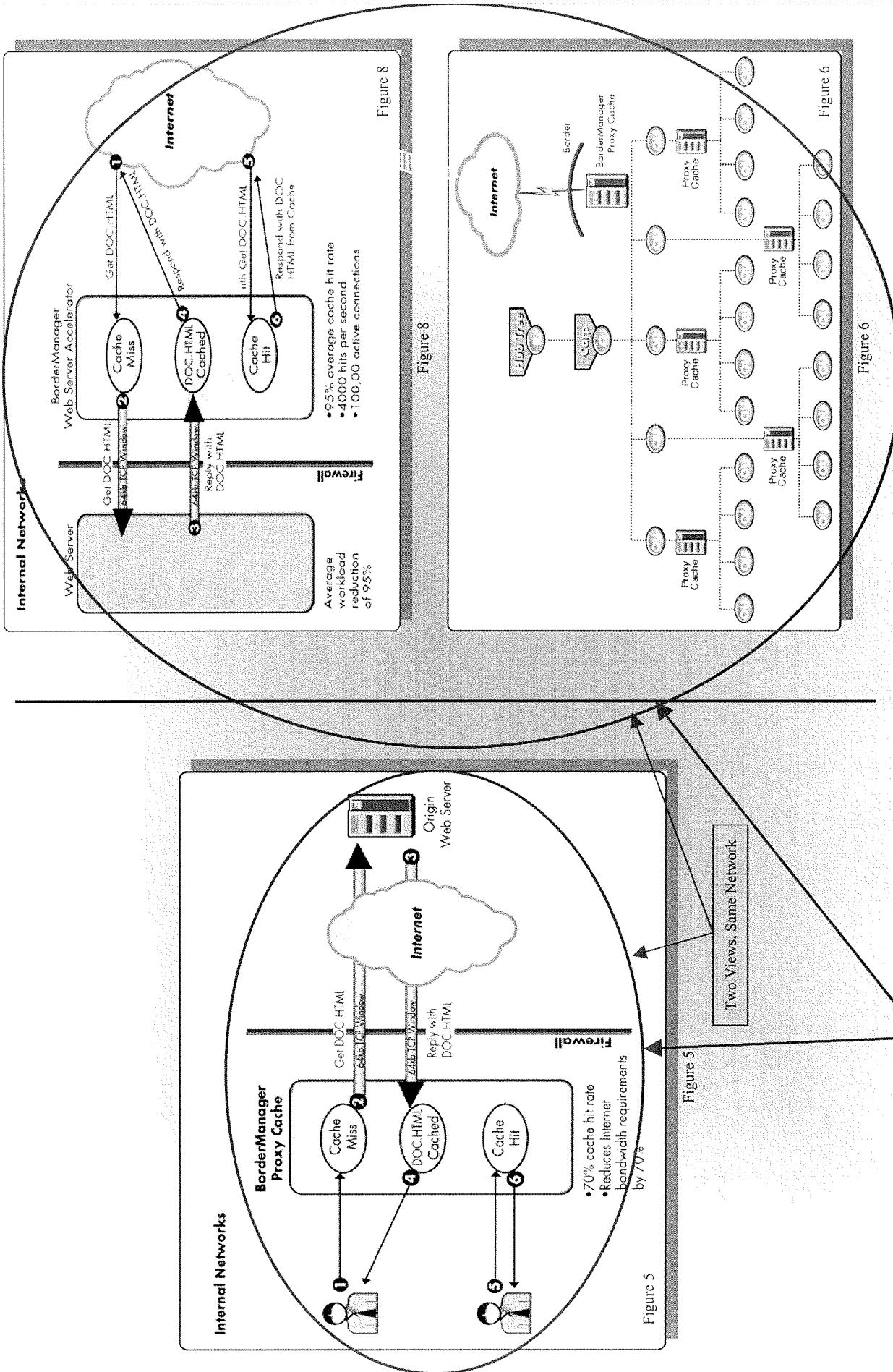
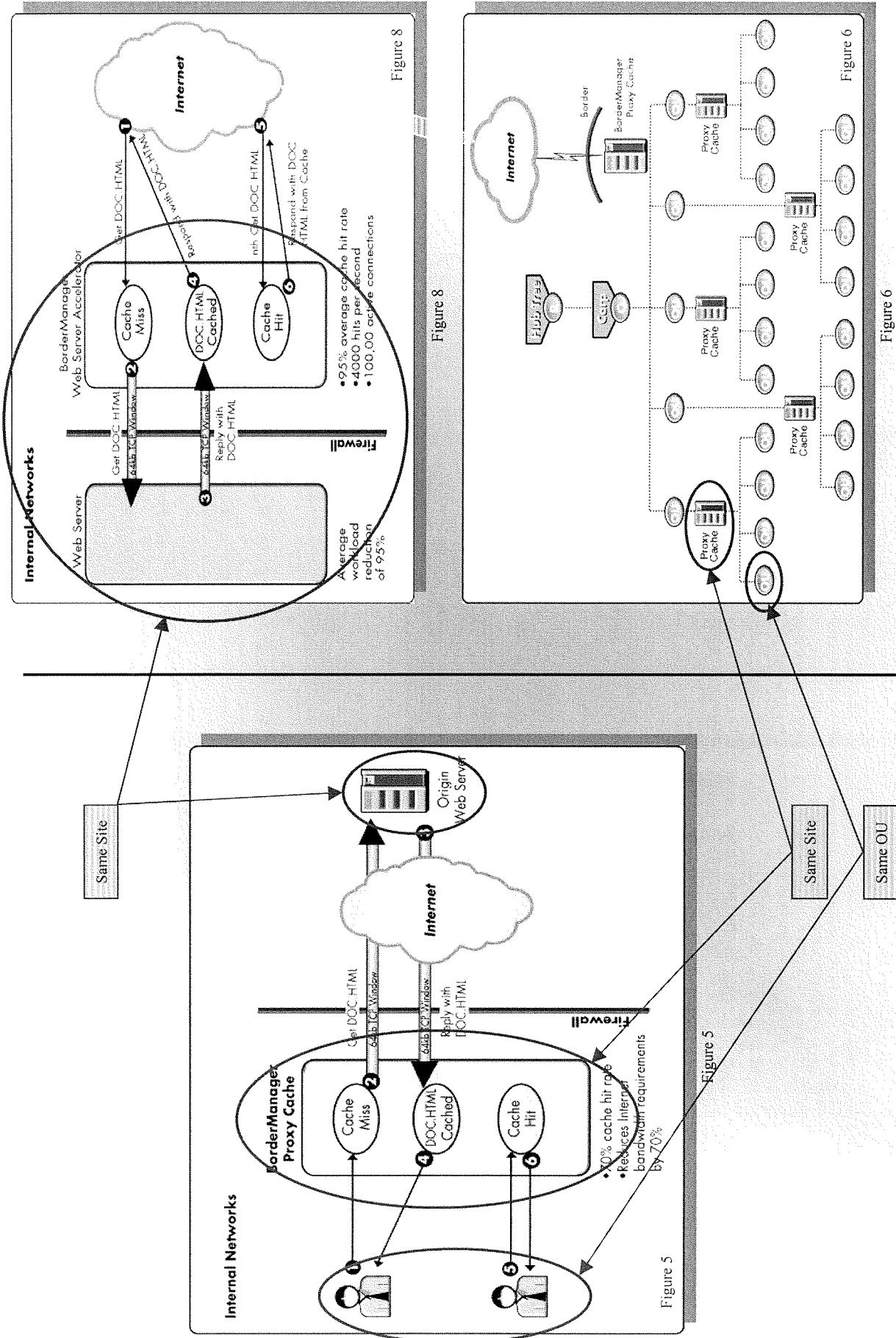


Figure 5

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:



1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:



1. In a network of digital computers that includes a first plurality of Network Distributed Cache (“NDC”) sites, each NDC site including an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

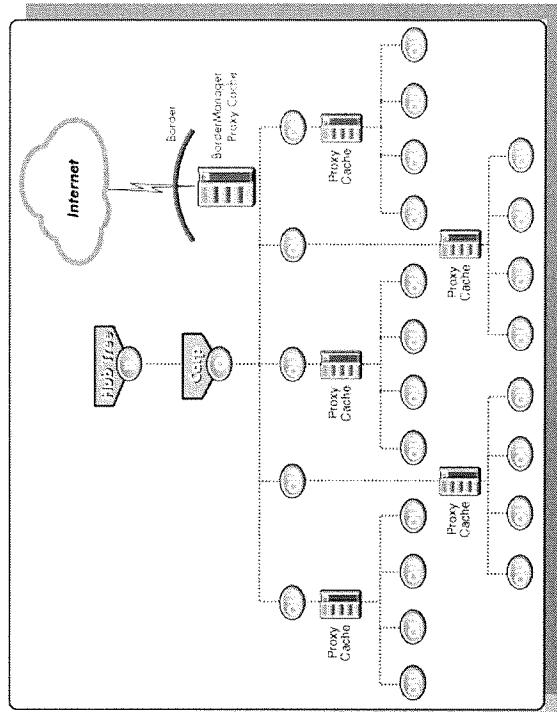


Figure 6

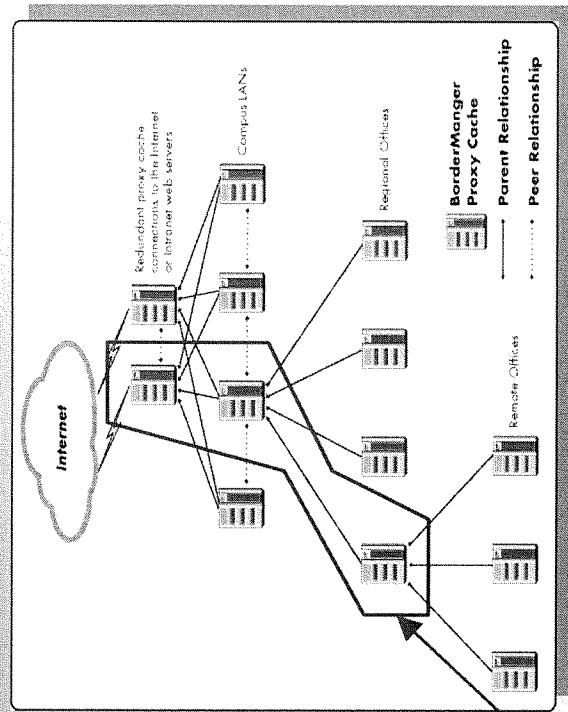


Figure 7

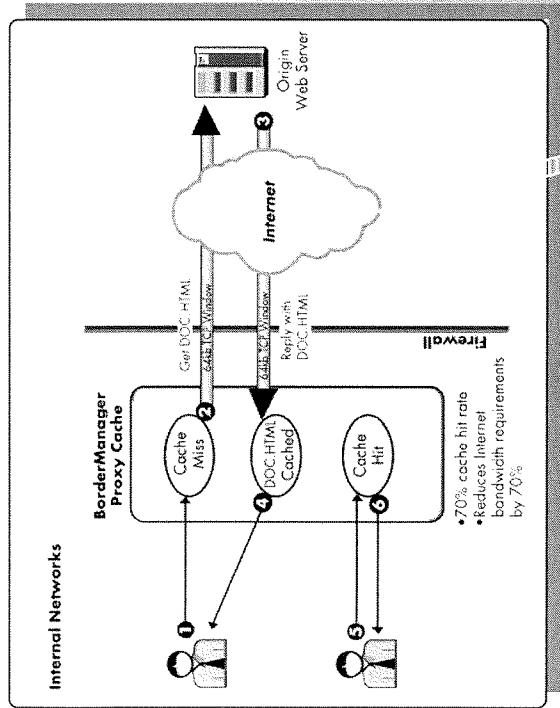


Figure 5

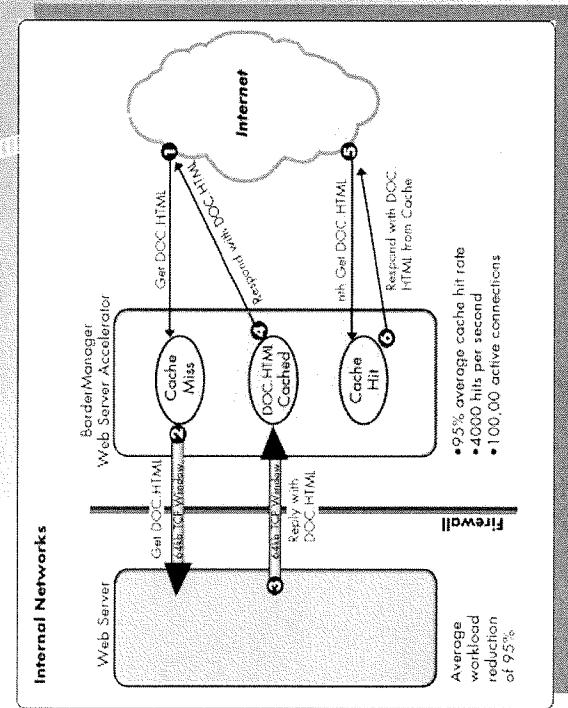


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

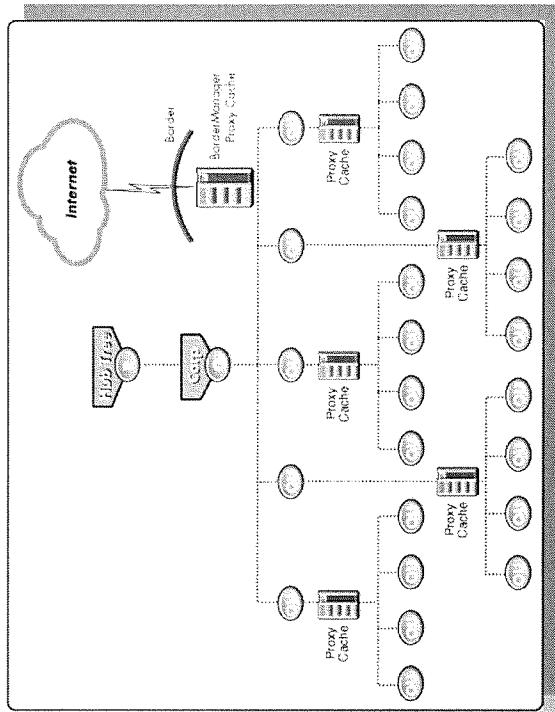
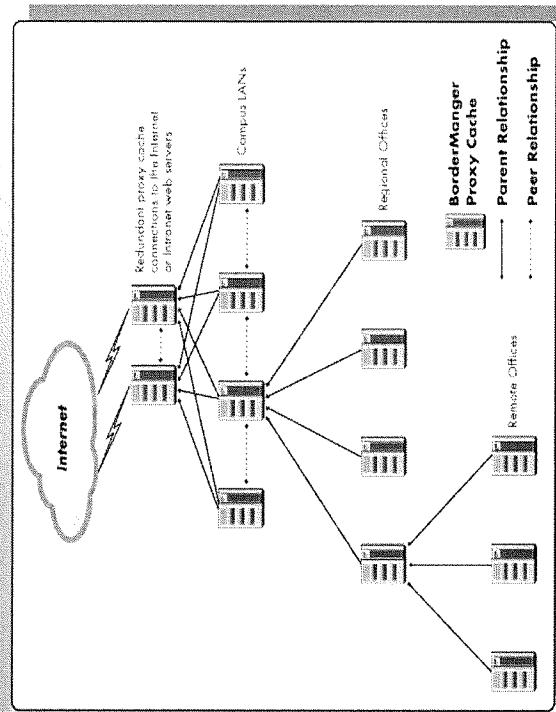
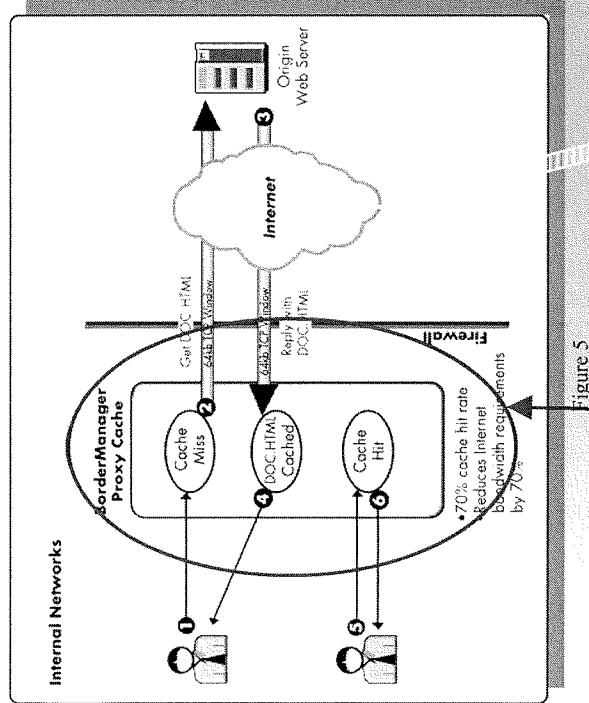


Figure 6



Figure



3

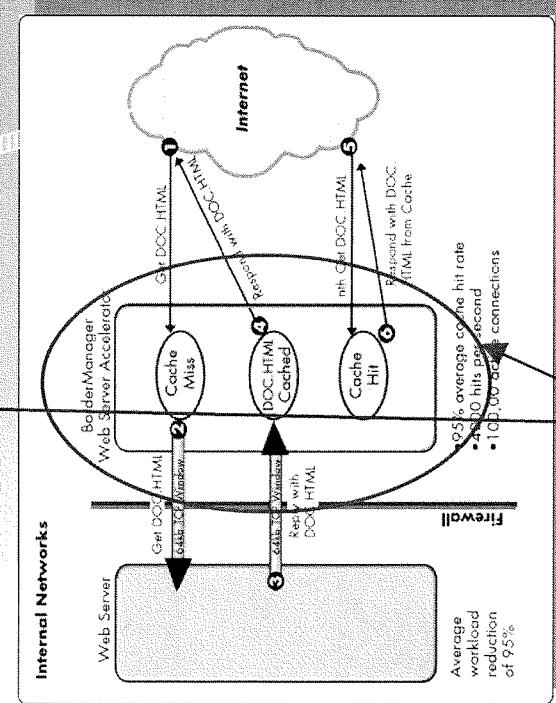


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

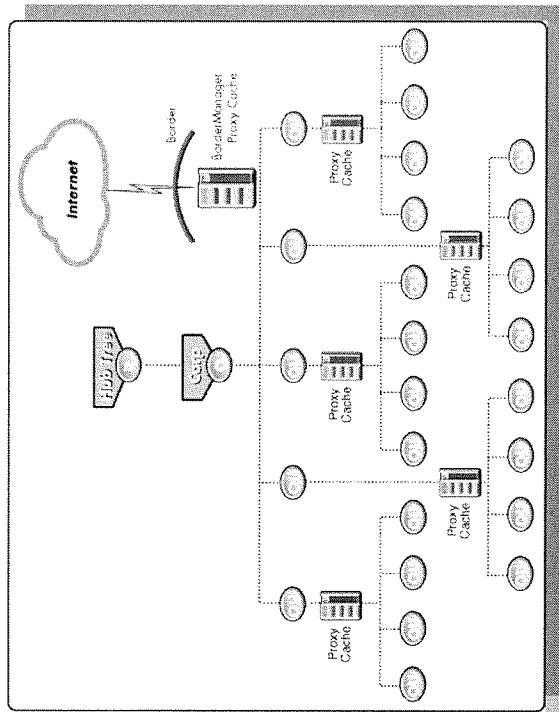


Figure 6

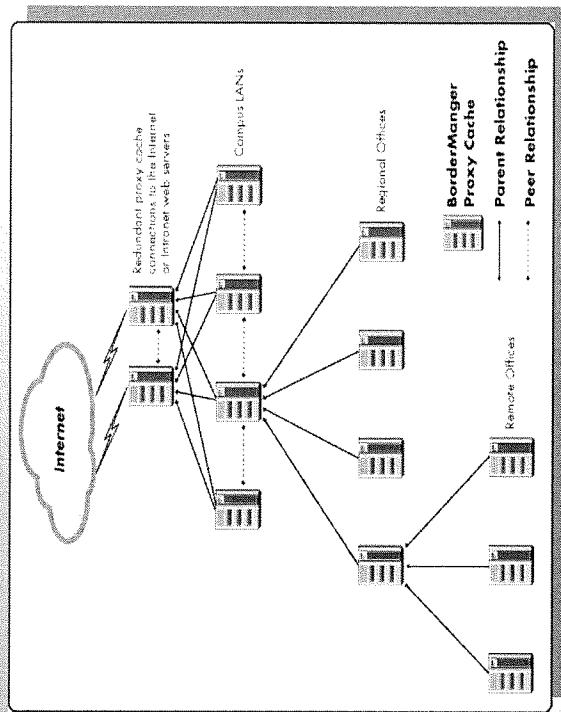


Figure 7

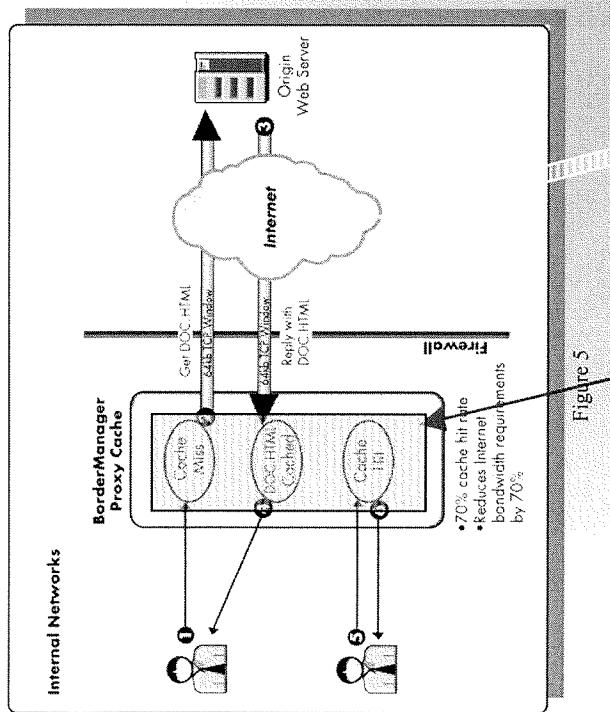


Figure 5

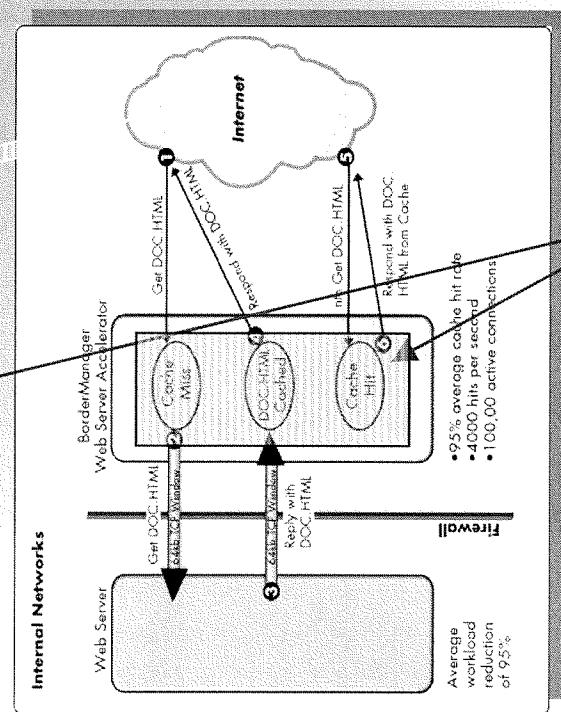


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

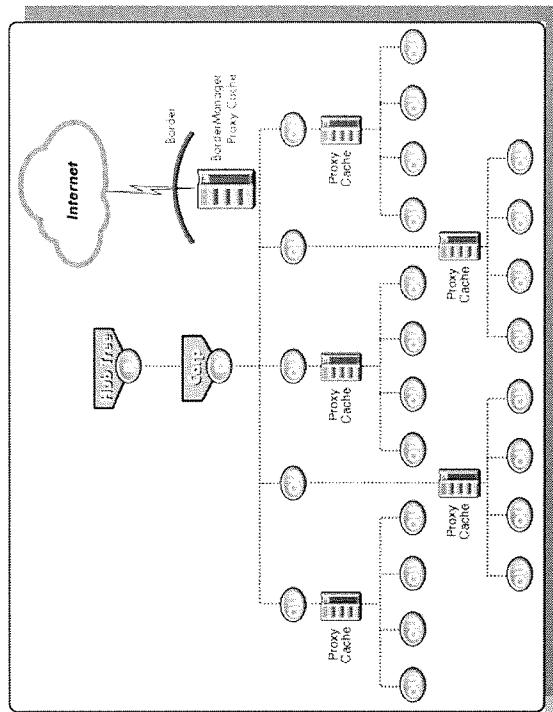


Figure 6

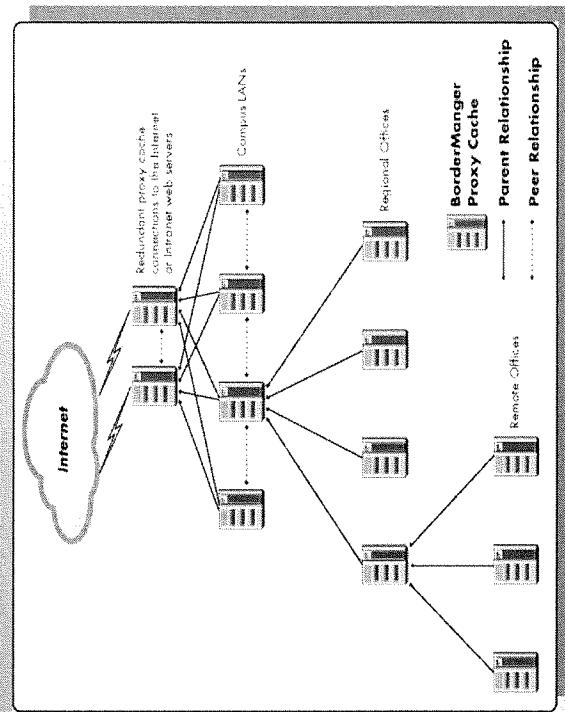


Figure 7

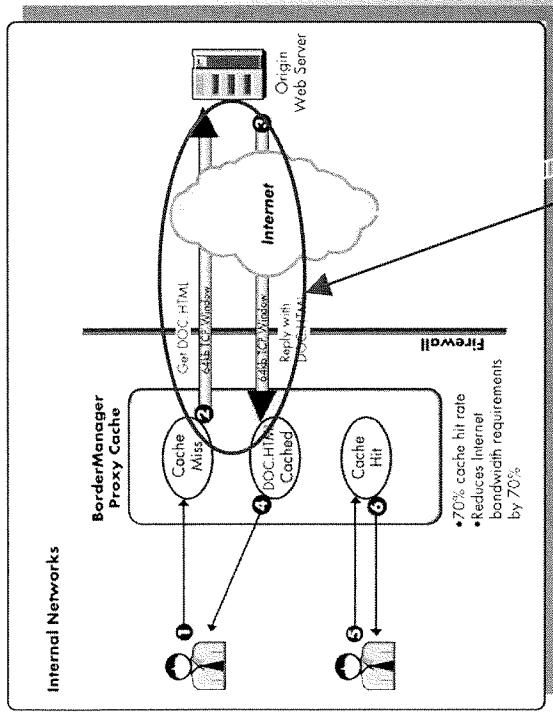


Figure 5

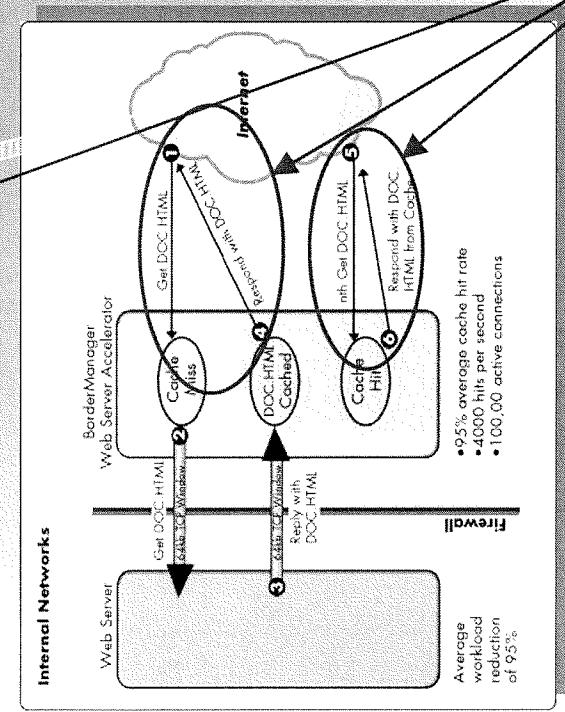


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

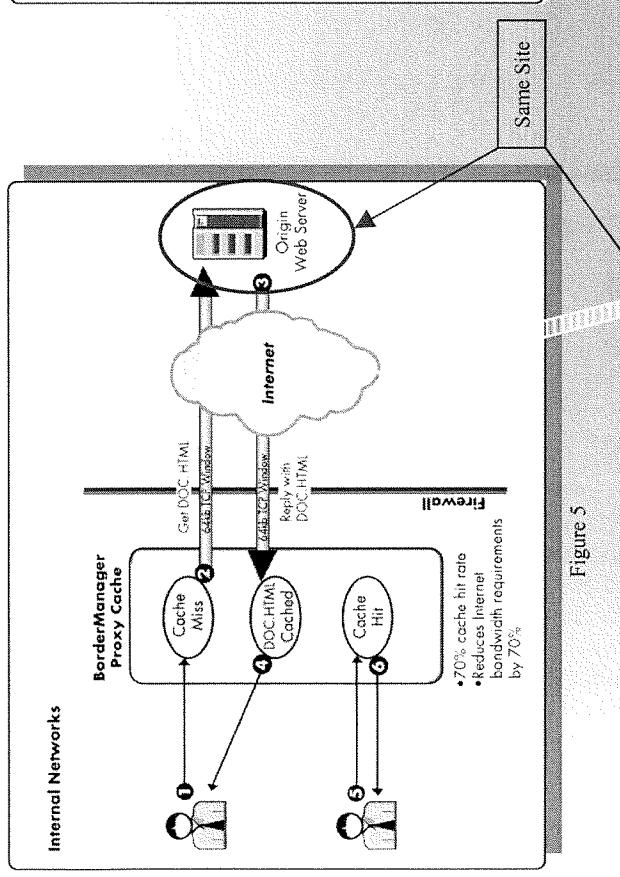


Figure 5

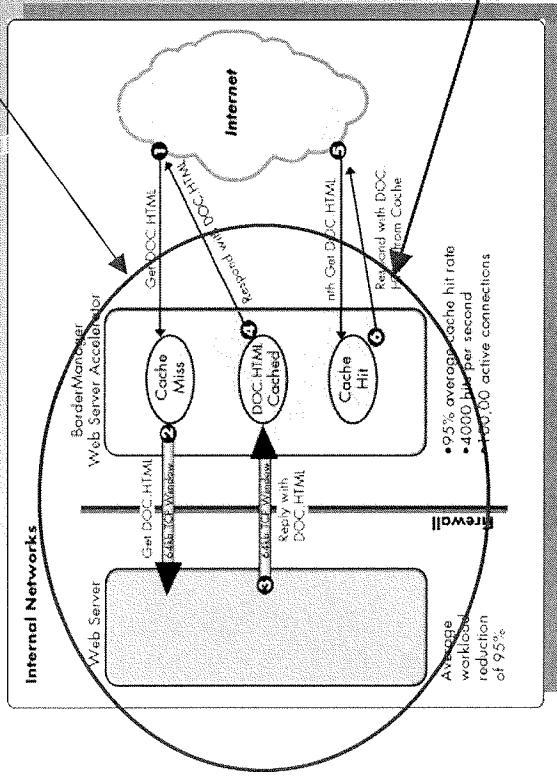


Figure 8

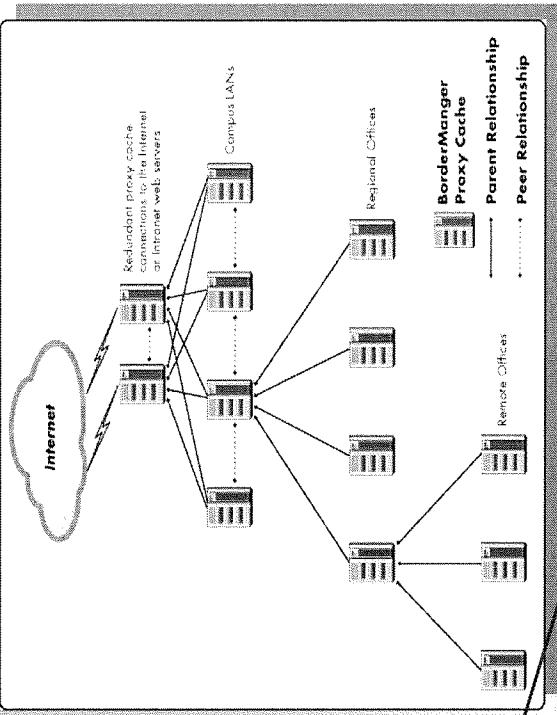


Figure 6

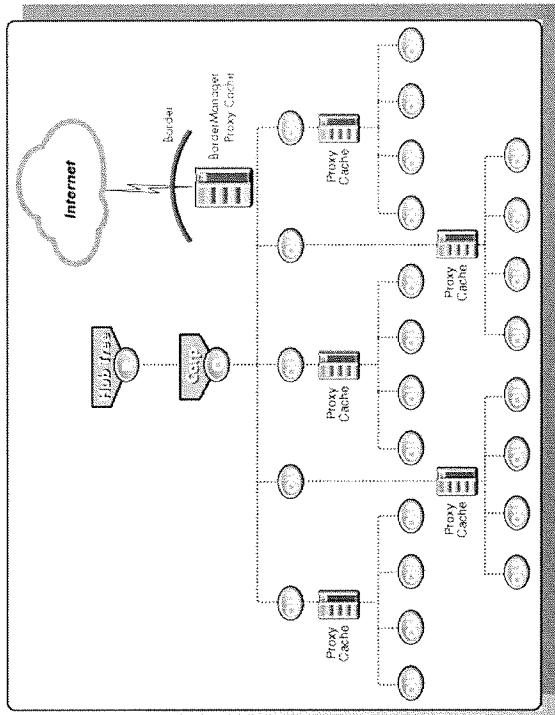


Figure 7

1. In a network of digital computers that includes a first plurality of Network Distributed Cache (“NDC”) sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

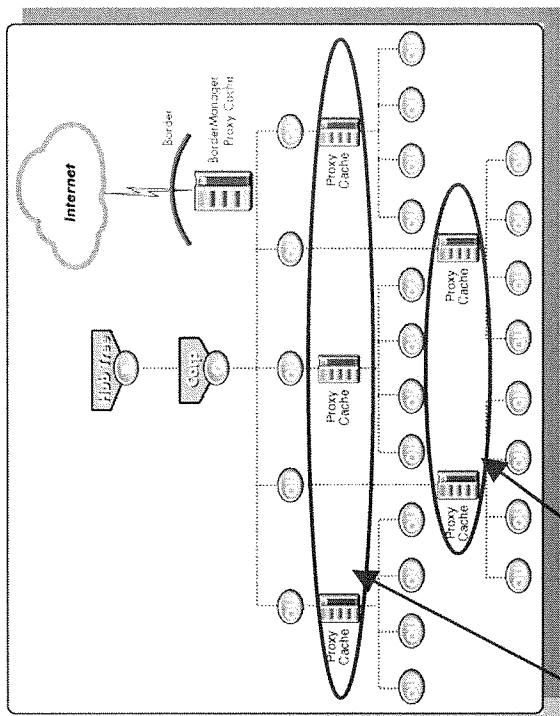


Figure 6

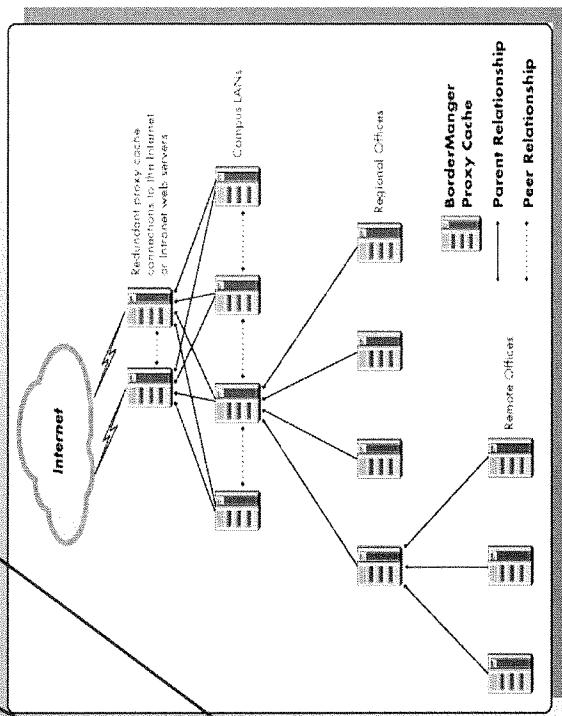


Figure 7

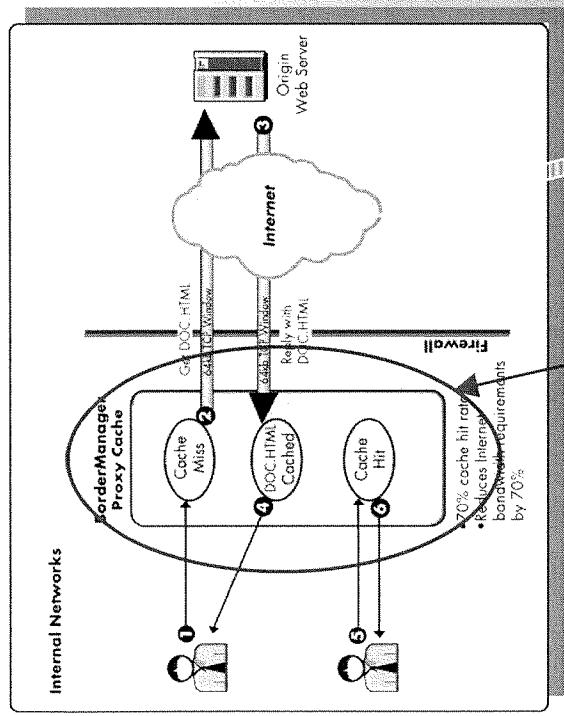


Figure 5

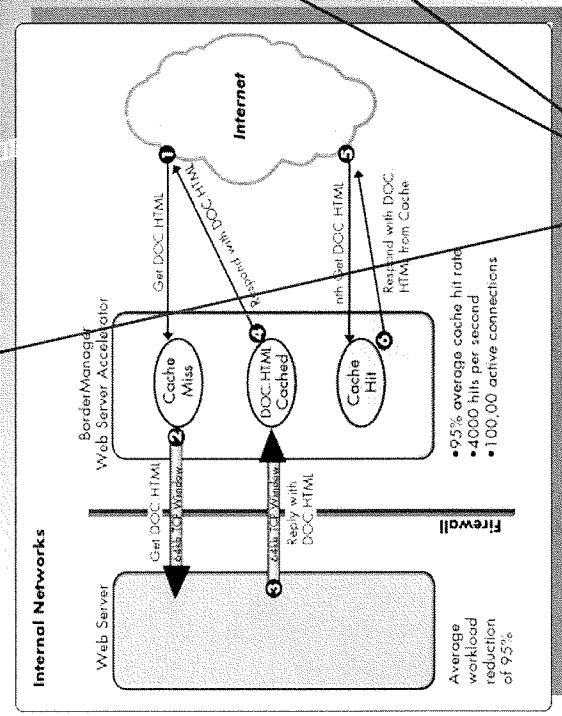


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

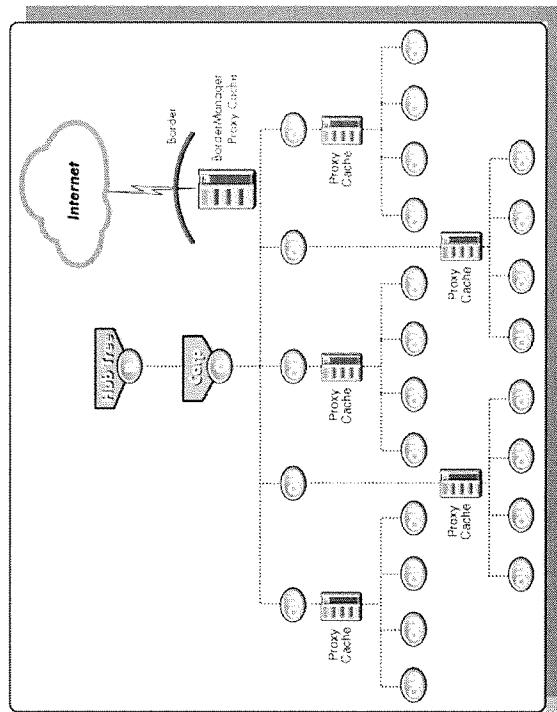


Figure 5

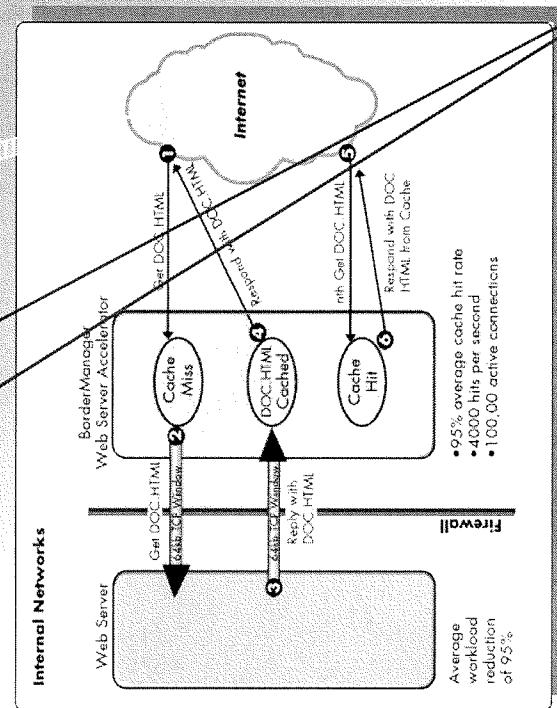


Figure 6

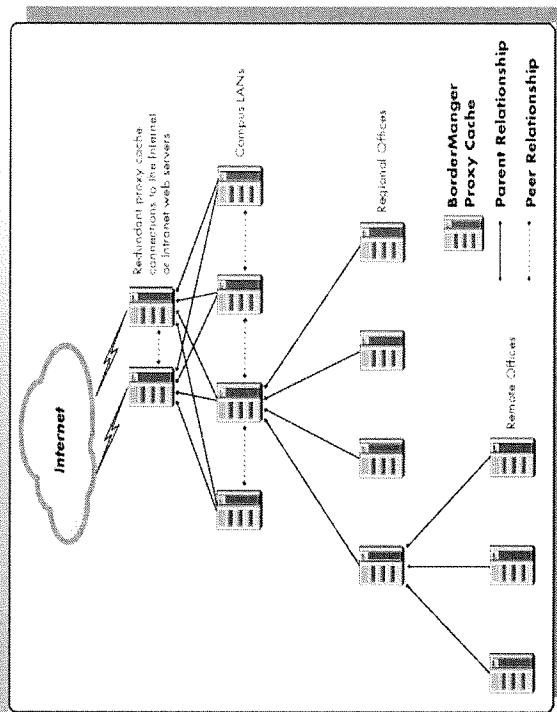


Figure 7

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

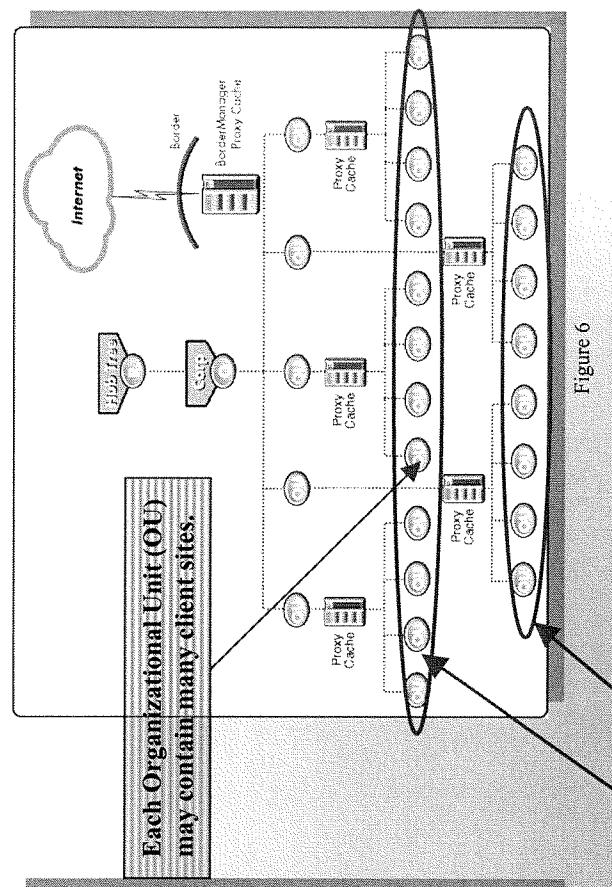


Figure 6

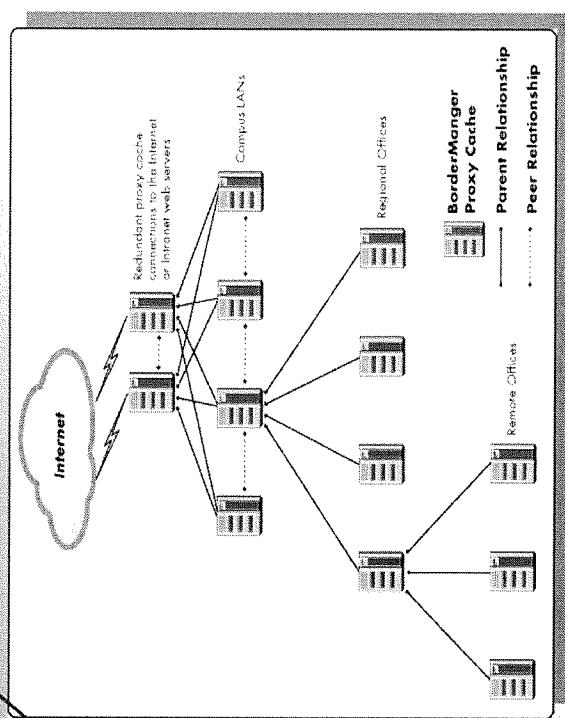


Figure 7

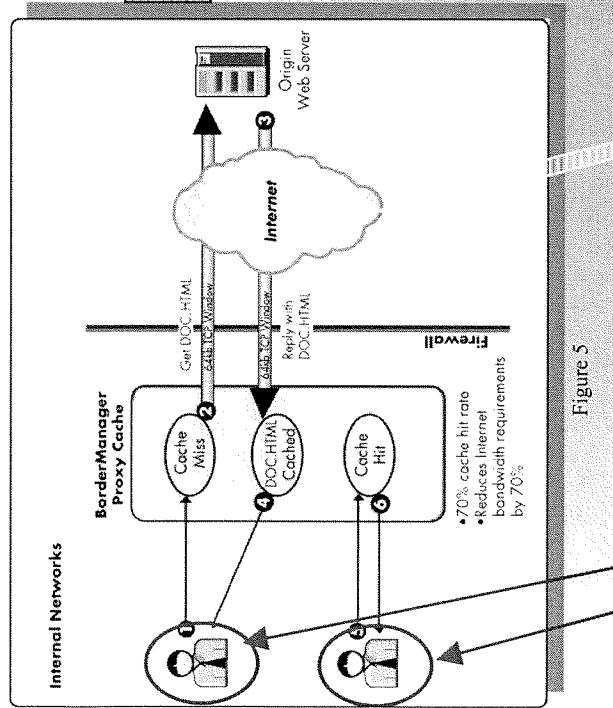


Figure 5

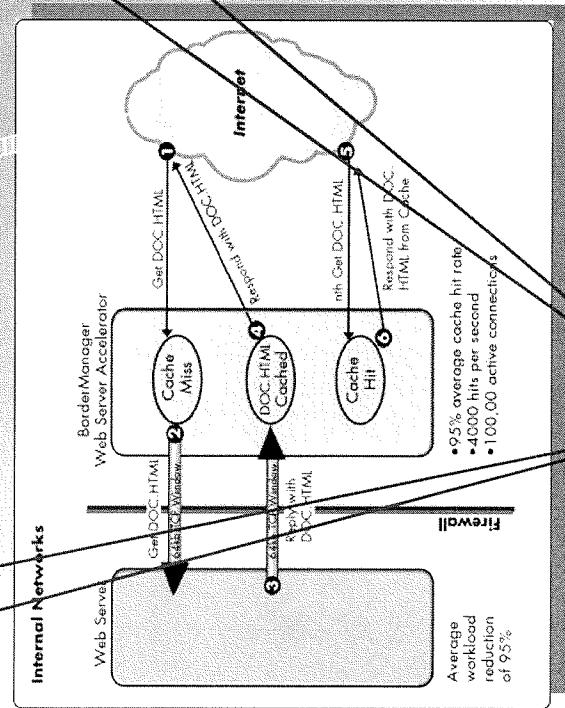


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of:

NCT010668

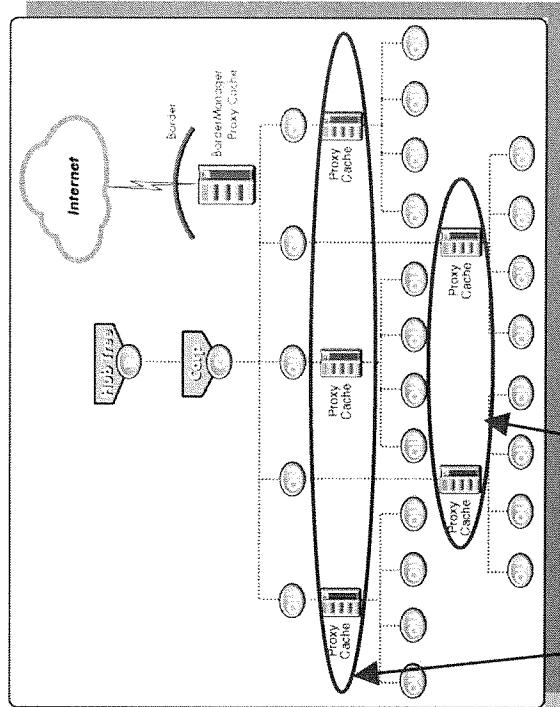


Figure 6

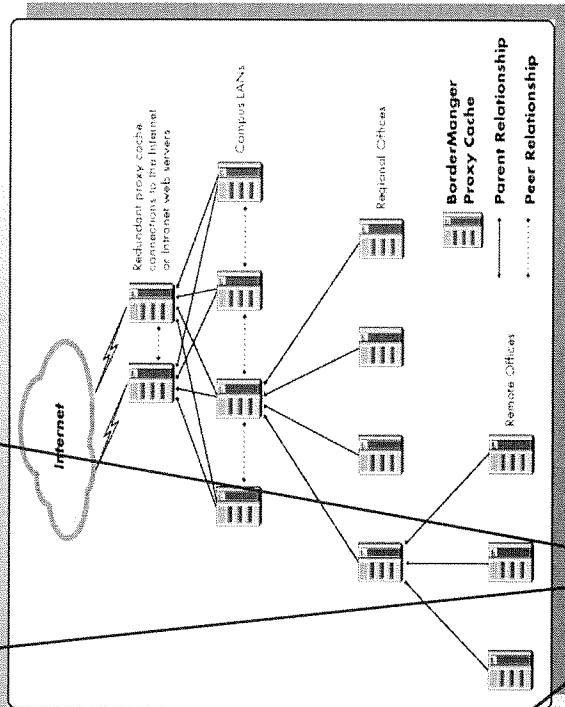


Figure 7

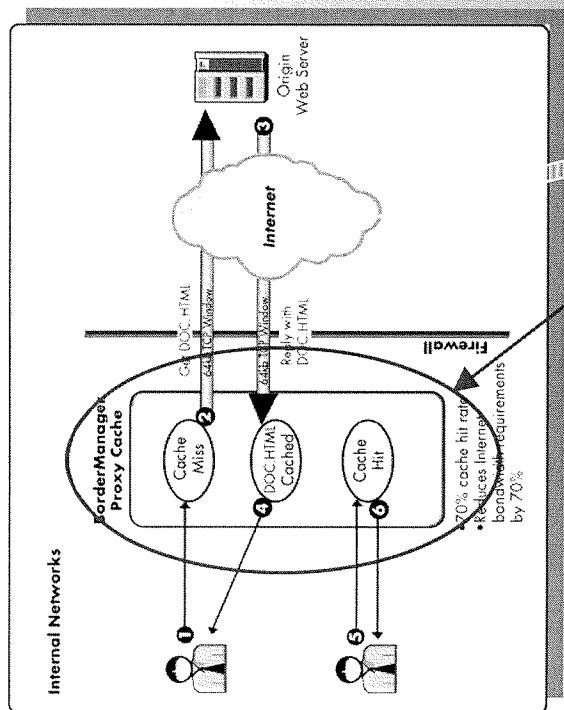


Figure 5

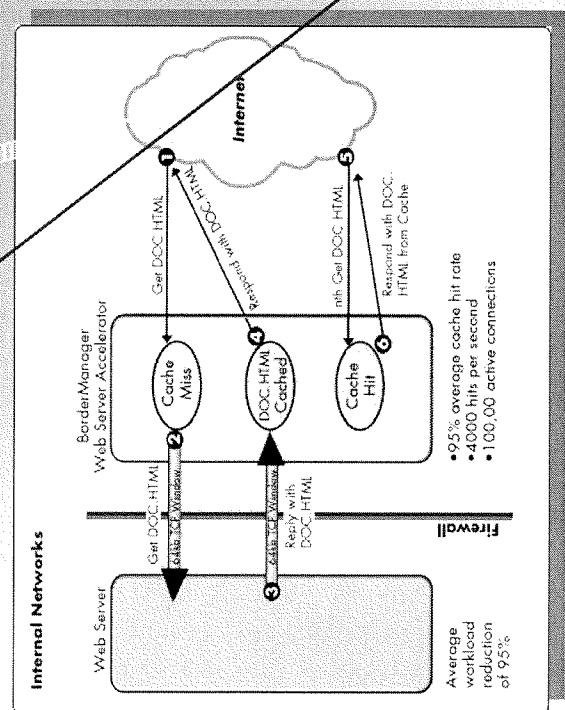


Figure 8

1. In a network of digital computers that includes a first plurality of Network Distributed Cache ("NDC") sites, each NDC site including an NDC that has an NDC buffer, a method for projecting images of a stored dataset from an NDC server terminator site into a second plurality of NDC client terminator sites in response to requests to concurrently access such stored dataset transmitted from a third plurality of client sites respectively to the second plurality of NDC client terminator sites, the method comprising the steps of: